

AMENDMENTS TO THE CLAIMS

The following represents a complete listing of the claims submitted in the present application including the present status of each and any amendments being made by this paper.

Listing of the Claims

1-52 (canceled).

53 (previously presented). A method of suppressing the expression of a selected gene in a eukaryotic cell the method comprising introducing into the cell (a) a polypeptide comprising a nucleic acid binding portion which binds to a site at or associated with the selected gene which site is present in a eukaryotic genome and a chromatin inactivation portion, or (b) a polynucleotide encoding said polypeptide wherein the chromatin inactivation portion is selected from all or a N-CoR- or SMRT-binding part of PLZF or wherein the nucleic acid binding portion is selected from all or a DNA binding part of a nuclear receptor DNA binding protein.

54 (previously presented). A method according to claim 53 wherein when the nucleic acid binding portion is selected from a DNA binding portion of RARV the chromatin inactivation portion being other than a portion of PLZF protein and is other than a portion of PML protein; or wherein the nucleic acid binding portion is other than a DNA binding portion of the *Saccharomyces cerevisiae* GAL4 protein.

55(previously presented). A method according to claim 53 or 54 wherein the nucleic acid binding portion is a DNA binding portion.

56(previously presented). A method according to claim 53 or 54 wherein the nucleic acid binding portion is an RNA binding portion and the site present in a eukaryotic genome is a nascent RNA being transcribed from DNA.

57(previously presented). A method according to claim 53 or 54 wherein when the nucleic acid binding portion is selected from all or a DNA binding part of a nuclear receptor DNA binding protein the chromatin inactivation portion facilitates histone deacetylation.

58(previously presented). A method according to claim 55 wherein when the nucleic acid binding portion is selected from all or a DNA binding part of a nuclear receptor DNA binding protein the chromatin inactivation portion facilitates histone deacetylation.

59(previously presented). A method according to claim 53 or 54 wherein when the nucleic acid binding portion is selected from all or a DNA binding part of a nuclear receptor DNA binding protein the chromatin inactivation portion being selected from all or a portion of a component of a histone deacetylation (HDAC) complex or all or a portion of a polypeptide which binds to or facilitates the recruitment of a HDAC complex.

60(previously presented). A method according to claim 55 wherein when the nucleic acid binding portion is selected from all or a DNA binding part of a nuclear receptor DNA binding protein the chromatin inactivation portion is selected from all or a portion of a component of a histone deacetylation (HDAC) complex or all or a portion of a polypeptide which binds to or facilitates the recruitment of a HDAC complex.

61(previously presented). A method according to claim 57 wherein when the nucleic acid binding portion is selected from all or a DNA binding part of a nuclear receptor DNA binding protein the chromatin inactivation portion is selected from all or a portion of a component of a histone deacetylation (HDAC) complex or all or a portion of a polypeptide which binds to or facilitates the recruitment of a HDAC complex.

62(previously presented). A method according to claim 59 wherein the component of the HDAC complex or the polypeptide which binds to or facilitates the recruitment of a HDAC complex is selected from PLZF, N-CoR, SMRT, Sin3, SAP18, SAP30 and HDAC.

63(previously presented). A method according to claim 60 wherein the component of the HDAC complex or the polypeptide which binds to or facilitates the recruitment of a

HDAC complex is selected from PLZF, N-CoR, SMRT, Sin3, SAP18, SAP30 and HDAC.

64(previously presented w). A method according to claim 61 wherein the component of the HDAC complex or the polypeptide which binds to or facilitates the recruitment of a HDAC complex is selected from PLZF, N-CoR, SMRT, Sin3, SAP18, SAP30 and HDAC.

65(previously presented). A method according to claim 62 wherein the chromatin inactivation portion is selected from all or a N-CoR- or SMRT-binding part of PLZF.

66(previously presented). A method according to claim 63 wherein the chromatin inactivation portion is selected from all or a N-CoR- or SMRT-binding part of PLZF.

67(previously presented). A method according to claim 64 wherein the chromatin inactivation portion is selected from all or a N-CoR- or SMRT-binding part of PLZF.

68(previously presented). A method according to claim 62 wherein the chromatin inactivation portion is selected from all or an enzymatically active part of a HDAC.

69(previously presented). A method according to claim 63 wherein the chromatin inactivation portion is selected from all or an enzymatically active part of a HDAC.

70(previously presented). A method according to claim 64 wherein the chromatin inactivation portion is selected from all or an enzymatically active part of a HDAC.

71(previously presented w). A method according to claim 55 wherein when the chromatin inactivation portion is selected from all or a N-CoR- or SMRT-binding part of PLZF the DNA binding portion is selected from all or a DNA-binding part of a zinc-finger DNA binding protein or all or a DNA-binding part of a helix-turn-helix DNA binding protein.

72(previously presented). A method according to claim 71 wherein the DNA binding portion is selected from all or a DNA-binding part selected from an animal or plant DNA binding protein.

73(previously presented). A method according to claim 71 wherein the DNA binding portion is selected from all or a DNA-binding part selected from a bacterial or yeast DNA binding protein engineered to bind plant or animal genome.

74(previously presented). A method according to claim 53 wherein the DNA binding portion is selected from all or a DNA binding part of a steroid hormone receptor protein.

75(previously presented). A method according to claim 74 wherein the steroid hormone receptor protein is selected from all or a DNA-binding portion of estrogen receptor (ER) or all or a DNA-binding portion of androgen receptor (AR).

76(previously presented). A method according to claim 56 wherein the RNA binding protein binds to nascent RNA expressed from proviral DNA.

77(previously presented). A method according to claim 76 wherein the RNA binding protein is selected from tat or a tat-like protein or an RNA-binding portion thereof.

78(previously presented). A method according to claim 53 wherein the nucleic acid binding portion and the chromatin inactivation portion are fused.

79(previously presented). A method according to claim 53 wherein the eukaryotic cell is selected from an animal cell and is contained within an animal or a plant cell and is contained within a plant.

80(previously presented). A method according to claim 53 wherein the expression of a selected gene in a human is suppressed.

81(previously presented). A method according to claim 53 wherein the expression of a plurality of selected gene is suppressed.

82(previously presented). Use in the manufacture of an agent for suppressing the expression of the selected gene in a eukaryotic cell selected from (a) a polypeptide comprising a nucleic acid binding portion which binds to a site at or associated with the selected gene which site is present in a eukaryotic genome and a chromatin inactivation portion, or (b) a polynucleotide encoding a polypeptide comprising a nucleic acid binding portion which binds to a site at or associated with a selected gene which site is

present in a plant or animal genome and a chromatin inactivation portion selected from all or a N-CoR- or SMRT-binding part of PLZF or wherein the nucleic acid binding portion is selected from all or a DNA binding part of a nuclear receptor DNA binding protein.

83(previously presented). Use according to claim 82 wherein the agent is a medicament for suppressing the expression of a selected gene in an animal.

84(previously presented). A method of treating a patient in need of suppression of the expression of a selected gene, the method comprising a step selected from

- (a) administering to the patient an effective amount of a polypeptide comprising a nucleic acid binding portion which binds to a site at or associated with the selected gene and a chromatin inactivation portion; and
- (b) administering to the patient an effective amount of a polynucleotide encoding a polypeptide comprising a nucleic acid binding portion which binds to a site at or associated with the selected gene and a chromatin inactivation portion.

85(previously presented). Use in the manufacture of a medicament for suppressing the expression of the selected gene in a eukaryotic cell selected from a polypeptide comprising a nucleic acid binding portion which binds to a site at or

associated with the selected gene which site is present in a eukaryotic genome and a chromatin inactivation portion, or (b) a polynucleotide encoding a polypeptide comprising a nucleic acid binding portion which binds to a site at or associated with a selected gene which site is present in a plant or animal genome and a chromatin inactivation portion selected from all or a N-CoR- or SMRT-binding part of PLZF or wherein the nucleic acid binding portion is selected from all or a DNA binding part of a nuclear receptor DNA binding protein.

86(previously presented). A composition selected from pharmaceutical compositions and compositions used in medicine selected from (a) a polypeptide comprising a nucleic acid binding portion which binds to a site at or associated with the selected gene which site is present in a eukaryotic genome and a chromatin inactivation portion, or (b) a polynucleotide encoding a polypeptide wherein the chromatin inactivation portion is selected from all or a N-CoR- or SMRT-binding part of PLZF or wherein the nucleic acid binding portion is selected from all or a DNA binding part of a nuclear receptor DNA binding protein.

87(previously presented). A composition according to claim 86 including a pharmaceutically acceptable carrier.

88(previously presented). A composition according to claim 86 wherein the composition is a polypeptide.

89(previously presented). A composition according to claim 86 wherein the composition is a polynucleotide encoding a polypeptide.

90(previously presented). A polynucleotide encoding a polypeptide according to claim 89 wherein the polynucleotide comprises a promoter operably linked to allow expression of the polypeptide.

91(previously presented). A polynucleotide according to claim 90 wherein the promoter is an inducible promoter.

92(previously presented). A polynucleotide according to any one of claims 89-91 wherein said polynucleotide is included in a vector.

93(previously presented). A polynucleotide according to claim 92 wherein said vector is an animal cell vector.

94(previously presented). A polynucleotide according to claim 92 wherein said vector is a plant cell vector.

95(previously presented). A polynucleotide according to claim 92 wherein said vector is a viral vector.

96(previously presented). A polynucleotide according to claim 93 wherein said vector is a viral vector.

97(previously presented). A polynucleotide according to claim 94 wherein said vector is a viral vector.

98(previously presented). A polynucleotide according to claim 92 wherein said vector is a plasmid vector.

99(previously presented). A polynucleotide according to claim 93 wherein said vector is a plasmid vector.

100(previously presented). A polynucleotide according to claim 94 wherein said vector is a plasmid vector.

101(previously presented). A host cell comprising a polynucleotide according to claim 86.

102(previously presented). A host cell according to claim 101 wherein said host cell is a bacterial cell.

103(previously presented). A host cell according to claim 101 wherein said host cell is an animal cell.


104(previously presented). A host cell according to claim 101 wherein said host cell is a plant cell.

105(previously presented). A host cell according to claim 103 wherein said host cell is contained in an animal.

106(previously presented). A host cell according to claim 104 wherein said host cell is contained in a plant.

CERTIFICATE OF FACSIMILE TRANSMISSION

I hereby certify that the foregoing Response to the Election/Restriction Requirement in response to the Official Action mailed June 2, 2005, in application Serial No. 10/019,520, filed June 10, of Lakjaya Buluwela et al, entitled "CONTROL OF GENE EXPRESSION", and a transmittal letter are being sent by facsimile transmission to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on June 21, 2005.


Barbara L. Davis
On behalf of C. G. Mersereau

Date of Signature: June 21, 2005